

6BL8

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (*Design-Center Values*):

Voltage (AC or DC) 6.3 ± 0.6 volts

Current at heater volts = 6.3 0.450 amp

Peak heater-cathode voltage (Each unit):

Heater negative with
respect to cathode 100 max. voltsHeater positive with
respect to cathode 100 max. volts

Direct Interelectrode Capacitances:^a

Triode Unit:

Grid to plate 1.5 $\mu\mu\text{f}$ Grid to cathode and heater 2.5 $\mu\mu\text{f}$ Plate to cathode and heater 1.8 $\mu\mu\text{f}$

Pentode Unit:

Grid No.1 to plate 0.025 max. $\mu\mu\text{f}$ Grid No.1 to cathode & grid No.3 &
internal shield, grid No.2,
and heater 5.5 $\mu\mu\text{f}$ Plate to cathode & grid No.3 &
internal shield, grid No.2,
and heater 3.8 $\mu\mu\text{f}$ Pentode plate to triode grid 0.02 max. $\mu\mu\text{f}$ Pentode grid No.1 to triode plate 0.16 max. $\mu\mu\text{f}$ Pentode plate to triode plate 0.07 max. $\mu\mu\text{f}$

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate Voltage	100	170	volts
Grid-No.2 Voltage	—	170	volts
Grid-No.1 Voltage	—2	—2	volts
Amplification Factor	20	—	
Amplification Factor, Grid No.2 to Grid No.1	—	47	
Plate Resistance (Approx.)	—	0.4	megohm
Transconductance	5000	6200	μmhos
Plate Current	14	10	ma
Grid-No.2 Current	—	2.8	ma
Input Resistance at frequency (Mc) = 50	—	0.01	megohm
Equivalent Noise Resistance	—	1500	ohms

Mechanical:

Operating Position Any

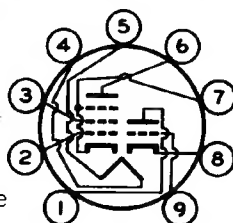
Type of Cathodes Coated Unipotential

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6BL8

Maximum Overall Length. 2-3/16"
 Maximum Seated Length 1-15/16"
 Length, Base Seat to Bulb Top (Excluding tip) . . 1-9/16" \pm 3/32"
 Diameter. 0.750" to 0.875"
 Dimensional Outline See *General Section*
 Bulb. T6-1/2
 Base. Small-Button Noval 9-Pin (JEDEC No.E9-1)
 Basing Designation for BOTTOM VIEW. 9DC

Pin 1 - Triode Plate
 Pin 2 - Pentode
 Grid No.1
 Pin 3 - Pentode
 Grid No.2
 Pin 4 - Heater
 Pin 5 - Heater
 Pin 6 - Pentode Plate



Pin 7 - Pentode
 Grid No.3,
 Pentode
 Cathode,
 Internal
 Shield
 Pin 8 - Triode
 Cathode
 Pin 9 - Triode Grid

AMPLIFIER — Class A₁

Maximum Ratings, Design-Center Values:

	Triode Unit	Pentode Unit	
PLATE SUPPLY VOLTAGE.	550 max.	550 max.	volts
PLATE VOLTAGE	250 max.	250 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE.	-	550 max.	volts
GRID-No.2 VOLTAGE:			
With cathode ma. = 14	-	175 max.	volts
With cathode ma. < 10	-	200 max.	volts
CATHODE CURRENT	14 max.	14 max.	ma
GRID-No.2 INPUT:			
With plate dissipation (watts) > 1.2	-	0.5 max.	watt
With plate dissipation (watts) < 1.2	-	0.75 max.	watt
PLATE DISSIPATION	1.5 max.	1.7 max.	watts

Maximum Circuit Values:

	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation.	0.5 max.	0.5 max.	megohm
For cathode-bias operation.	0.5 max.	1 max.	megohm

^a Without external shield.

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